### 510(k) Summary AS3700 Anesthesia Delivery System

This 510(k) Summary is provided in accordance with the requirements of 21 CFR 807.92.

Date:

December 21, 2010

Submitter:

Mindray DS USA, Inc. 800 MacArthur Blvd. Mahwah, NJ 07430 Contact: Russell Olsen

Director, Quality Assurance and Regulatory Affairs

Telephone: 201-995-8391 Facsimile: 201-995-8605

**Device Trade Name:** 

AS3700 Anesthesia Delivery System

Common Name:

Anesthesia Delivery

**Device Classification:** 

§868.1560- BSZ - Gas Machine, Anesthesia

**Predicate Devices:** 

AS3000 Anesthesia Delivery System / Mindray DS USA, Inc -

K080175

Avance / GE Datex-Ohmeda - K081844

Device description:

The AS3700 Anesthesia Delivery System is a device used to administer to a patient, continuously or intermittently, a general inhalation anesthetic and to maintain a patient's ventilation.

Indications for Use:

The AS3700 Anesthesia Delivery System is a device used to administer to a patient, continuously or intermittently, a general inhalation anesthetic and to maintain a patient's ventilation.

The AS3700 is intended for use by licensed clinicians, for patients requiring anesthesia within a health care facility, and can be used

in both adult and pediatric populations.

### Technological Comparison to Predicate Devices:

The AS3700 is equivalent to predicated devices respecting indications for use, basic operation, performance specifications and energy supply.

Relative to the predicate devices, the AS3700 incorporates a 15" LCD touch screen and the use of digital flow meters. The predicate Avance incorporates similar technology. The AS3000 support a separate display and traditional mechanical flow meters.

The AS3700 and the predicate Avance support equivalent ventilation modes: VCV, PCV, PCV- VG, SIMV-PC, SIMV-PC and PS. The predicate AS3000 supports VCV, PCV, SIMV-PC, and PS.

The AS3700 and both predicate devices are indicated for use in adult and pediatric populations. The AS3700 provides default ventilation parameter settings for adults and two pediatric populations defined as child and small child. The predicate AS3000 provides default setting for adults and the pediatric population defined as child. The predicate Avance provides default settings based on patient weight.

# Summary of Performance Testing:

The AS3700 Anesthesia Delivery System has been tested and found to be in compliance with recognized safety, performance and electromagnetic compatibility standards.

A risk analysis has been developed to identify potential hazards and document the mitigation of the hazards. The device's software has been verified and validated in accordance with the appropriate test requirements.

The AS3700 has been tested and found to be in compliance with the following safety, performance and electromagnet compatibility standards:

- IEC 60601-1:1988+A1:1991+A2:1995
- IEC 60601-1-2:2007
- IEC 60601-1-4:2000
- IEC 60601-1-8:2006
- IEC 60601-2-13:2003
- IEC 62304: 2006

- IEC 62366:2007
- ISO10993-1: 2003
- ISO 14971:2007
- ISO 15223:2000
- ISO 5356-1:2004
- ISO 21647:2004
- CGA V-1:2005
- CGA V-5:2008
- ASTM F1101-90:2003
- CEN EN 980:1996 +A1:1999+A2:2001

#### Conclusion:

Based on the description, technological comparison, performance testing and the supporting documentation, the AS3700 Anesthesia Delivery System is considered substantially equivalent to the predicate devices.







Food and Drug Administration 10903 New Hampshire Avenue Document Control Room –WO66-G609 Silver Spring, MD 20993-0002

Mr. Russell Olsen Vice President, Quality Assurance and Regulatory Affairs Mindray DS USA, Incorporated 800 MacArthur Boulevard Mahwah, New Jersey 07430

FEB 1 1 2011

Re: K102471

Trade/Device Name: AS3700 Anesthesia Delivery System

Regulation Number: 21 CFR 868,5160

Regulation Name: Gas Machine for Anesthesia or Analgesia

Regulatory Class: II Product Code: BSZ

Dated: February 10, 2011 Received: February 11, 2011

#### Dear Mr. Olsen:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the <u>Federal</u> Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to

http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to

http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm.

Sincerely yours,

Anthony Watson, B.S., M.S., M.B.A.

Director

Division of Anesthesiology, General Hospital, Infection Control and Dental Devices

Office of Device Evaluation

Center for Devices and

Radiological Health

## **Indications for Use**

510(k) Number (if known):
Device Name: AS3700 Anesthesia Delivery System
Indications For Use:
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The AS3700 is intended for use by licensed clinicians, for patients requiring anesthesia within a health care facility, and can be used in both adult and pediatric populations.
Description Use Y AND/OR Over-The-Counter Use
Prescription Use X AND/OR Over-The-Counter Use  (Part 21 CFR 801 Subpart D) (21 CFR 801 Subpart C)
(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)
Concurrence of CDRH, Office of Device Evaluation (ODE)  (Division Sign-Off)  (Division of Anesthesiology, General Hospital Division Of Anesthesiology, General Devices of 1
Division of Anesthesions of of An